UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,955	07/30/2003	Junichi Asoh	JP920020139US1	8898

53493 7590 09/21/2005

LENOVO (SINGAPORE) PTE. LTD.
BUILDING 675, MAIL C-137
4401 SILICON DRIVE
DURHAM, NC 27709

EXAMINER	
SHAPIRO, LEONID	

ART UNIT	PAPER NUMBER
2677	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/629,955	ASOH ET AL.	
	Examiner	Art Unit	
	Leonid Shapiro	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,3-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (US Patent No. 5,905,914).

As to claim 1, Sakai et al. teaches an information processing apparatus (See Col. 1, Lines 14-15) having an input device (See Fig. 1, item 51, Col. 16, Lines 51-63), comprising:

an output portion for outputting information from said information processing apparatus to the external (See Fig. 1, item 49, Col. 17, Lines 36-39);

a built-in button for controlling the output portion in response to an input from the external (See Fig. 1, item 51, Col. 16, Lines 51-63);

a first input information receiving portion for receiving external input information from an external input device having keys different from the built-in button (in the reference normal key), said external input information being information input to any said keys (See Fig. 1, items 30, 53, Col. 19, Lines 36-42); and

a controlling portion for initiating the same processing as that performed when one or more of the built-in button (hot key) are entered if the external input information matches preset configuration information (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

As to claim 3, Sakai et al teaches wherein said first input information receiving portion is a module operating in user mode on said operating system (See Fig. 1, item 30, SMI, INTR, Col. 19, Lines 36-51);

said information processing apparatus detects input information said built-in button through firmware stored in a non-volatile memory of said information processing apparatus for controlling hardware said information processing apparatus (See Fig. 1, item 22, Col. 31, Lines 14-24);

said controlling portion comprises a converting portion for converting said external input information into said built-in button input information (See Fig. 16, items 33-34, Col. 32, Lines 17-24); and

a reporting portion for reporting said converted input information said firmware to cause said firmware to initiate the same processing as that performed when built-in button is entered (See Fig. 1, items 22, 53, Col. 31, Lines 14-24).

As to claim 4, Sakai et al. teaches wherein said first input receives said external Information receiving portion input information from said external input device having said plurality of keys (See Fig. 1, item53, Col. 19, Lines 36-51); and

controlling portion for initiating the same processing as that performed when said built-in button is entered if it determined that a predetermined combination of keys among said plurality of keys is entered (See Fig. 16, items 33-34, Col. 32, Lines 17-24).

As to claim 5, Sakai et al. teaches an information processing apparatus (See Col. 1, Lines 14-15) having built-in buttons as an input device and processing information in

response to information input to built-in buttons (See Fig. 1, item 51, Col. 16, Lines 51-63), said information processing apparatus comprising:

a first input information receiving portion for receiving code information specified in a code system different from the code system for built-in button input information, code information being information input to a plurality of keys different from said built-in buttons (See Fig. 1, item 53, Col. 31, Lines 14-24);

a converting portion for converting said code information into said built-in button input information if it is determined that said code information matches preset configuration information (See Fig. 1, items 30, 53 Lines 19, Lines 36-51 and Fig. 16, item 33-34, Col. 26, Lines 48-65); and

a controlling portion for initiating the same processing as that performed when certain one or more of said built-in buttons are entered if said converted input information matches said information input to said certain one or more of said built-in buttons (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

As to claim 6, Sakai et al. teaches a built-in keyboard having said built-in buttons and said plurality of keys;

an external input device having said plurality of keys (See Fig. 1, item 53, Col. 19, Lines 36-51); and

a determining portion for determining whether or not said external input device is connected (See Fig. 1, item 53, Col. 31, Lines 60-63); wherein

said converting portion converts said code information if

is determined that said external device connected (See Fig. 16, items S33-S34, Col. 32, Lines 17-24),

halts conversion of said code information if determined that said external input device is not connected (Col. 31, Lines 60-63).

As to claims 7-8, Sakai et al. teaches wherein said first input information receiving portion receives said code information from an operating system interrupted by depression of any of said plurality of keys (See Fig. 1, items 30, 51, Col. 19, Lines 36-42);

and

said information processing apparatus further comprises second input information receiving portion detecting the depression of any of said built-in buttons periodically polling said built-in buttons (See Fig. 1, items 30, 51, Col. 19, Lines 42-51).

As to claim 9, Sakai et al. teaches an information processing apparatus (See Col. 1, Lines 14-15) having plurality of keys (in the reference normal key) and built-in buttons (in the reference hot key) (See Fig. 1, item 51, Col. 16, Lines 51-63), comprising:

a first input information receiving portion for receiving code information associated with depression of any plurality of keys detected through matrix scanning (in the reference normal key) (See Fig. 1, item 51, Col. 19, Lines 36-42); and

a second input information receiving portion for detecting input information to said built-in buttons different from said plurality of keys (in the reference hot key) (See Fig. 1, item 51, Col. 16, Lines 51-63);

a converting portion for converting said code information into said built-in button input information if it is determined that said code information matches preset configuration information (See Fig. 1, items 30, 53 Lines 19, Lines 36-51 and Fig. 16, item 33-34, Col. 26, Lines 48-65); and

a controlling portion for initiating the same processing as that performed when certain one or more of said built-in buttons are entered if said converted input information matches said information input to said certain one or more of said built-in buttons (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

As to claim 10, Sakai et al. teaches a control method, for controlling an information processing apparatus (See Col. 1, Lines 14-15) having an input device (See Fig. 1, item 51, Col. 16, Lines 51-63), comprising:

outputting information from said information processing apparatus to the external (See Fig. 1, item 49, Col. 17, Lines 36-39);

controlling the output step in response to an input from the external to a built-in button (See Fig. 1, item 51, Col. 16, Lines 51-63);

receiving an external input information from an external input device having keys different from the built-in button (in the reference normal key), said external input information being information input to any said keys (See Fig. 1, items 30, 53, Col. 19, Lines 36-42); and

initiating the same processing as that performed when one or more of the built-in button (hot key) are entered if the external input information matches preset configuration information (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

As to claim 11, Sakai et al. teaches a control method, for controlling an information processing apparatus having a built-in button (hot key) as an input device (See Fig. 1, item 51, Col. 16, Lines 51-63) and processing information in response to information input into built-in button (hot key) (See Fig. 17, item 46, Col. 32, Lines 57-67), comprising steps of:

receiving code information specified code system different from a code system for said built-in button input information, said code information being information input a plurality of keys different from said built-in buttons (See Fig. 1, items 30, 53, Col. 19, Lines 36-42);

controlling the output step in response to an input from the external to a built-in button (See Fig. 1, item 51, Col. 16, Lines 51-63);

converting said code information into said built-in button input information if it is determined that said code information matches preset configuration information (See Fig. 1, items 30, 53 Lines 19, Lines 36-51 and Fig. 16, item 33-34, Col. 26, Lines 48-65)

initiating the same processing as that performed when one or more of the built-in button (hot key) are entered if the external input information matches preset configuration information (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

As to claim 12, Sakai et al. teaches a method for controlling an information processing apparatus (See Col. 1, Lines 14-15) having plurality of keys (in the reference normal key) and built-in buttons (in the reference hot key) (See Fig. 1, item 51, Col. 16, Lines 51-63), comprising:

receiving code information associated with depression of any plurality of keys detected through matrix scanning (in the reference normal key) (See Fig. 1, item 51, Col. 19, Lines 36-42); and

detecting input information to said built-in buttons different from said plurality of keys (in the reference hot key) (See Fig. 1, item 51, Col. 16, Lines 51-63);

converting said code information into said built-in button input information if it is determined that said code information matches preset configuration information (See Fig. 1, items 30, 53 Lines 19, Lines 36-51 and Fig. 16, item 33-34, Col. 26, Lines 48-65); and

initiating the same processing as that performed when certain one or more of said built-in buttons are entered if said converted input information matches said information input to said certain one or more of said built-in buttons (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

As to claim 13, Sakai et al. teaches a program for using a computer to control an information processing apparatus (See Col. 1, Lines 14-15) having an input device (See Fig. 1, item 51, Col. 16, Lines 51-63), comprising:

an output portion for outputting information from said information processing apparatus to the external (See Fig. 1, item 49, Col. 17, Lines 36-39);

a built-in button for controlling the output portion in response to an input from the external (See Fig. 1, item 51, Col. 16, Lines 51-63);

a first input information receiving portion for receiving external input

information from an external input device having keys different from the built-in button (in the reference normal key), said external input information being information input to any said keys (See Fig. 1, items 30, 53, Col. 19, Lines 36-42); and

a controlling portion for initiating the same processing as that performed when one or more of the built-in button (hot key) are entered if the external input information matches preset configuration information (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

As to claim 14, Sakai et al. teaches a method for controlling an information processing apparatus (See Col. 1, Lines 14-15) having built-in buttons as an input device and processing information in response to information input to built-in buttons (See Fig. 1, item 51, Col. 16, Lines 51-63), said information processing apparatus comprising:

a first input information receiving portion for receiving code information specified in a code system different from the code system for built-in button input information, code information being information input to a plurality of keys different from said built-in buttons (See Fig. 1, item 53, Col. 31, Lines 14-24);

a converting portion for converting said code information into said built-in button input information if it is determined that said code information matches preset configuration information (See Fig. 1, items 30, 53 Lines 19, Lines 36-51 and Fig. 16, item 33-34, Col. 26, Lines 48-65); and

a control portion for initiating the same processing as that performed when certain one or more of said built-in buttons are entered if said converted input

information matches said information input to said certain one or more of said built-in buttons (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

As to claim 15, Sakai et al. teaches a program for using a computer to control an information processing apparatus (See Col. 1, Lines 14-15) having plurality of keys (in the reference normal key) and built-in buttons (in the reference hot key) (See Fig. 1, item 51, Col. 16, Lines 51-63), comprising:

a first input information receiving portion for receiving code information associated with depression of any plurality of keys detected through matrix scanning (in the reference normal key) (See Fig. 1, item 51, Col. 19, Lines 36-42); and

a second input information receiving portion for detecting input information to said built-in buttons different from said plurality of keys (in the reference hot key) (See Fig. 1, item 51, Col. 16, Lines 51-63);

a converting portion for converting said code information into said built-in button input information if it is determined that said code information matches preset configuration information (See Fig. 1, items 30, 53 Lines 19, Lines 36-51 and Fig. 16, item 33-34, Col. 26, Lines 48-65); and

a controlling portion for initiating the same processing as that performed when certain one or more of said built-in buttons are entered if said converted input information matches said information input to said certain one or more of said built-in buttons (See Fig. 16, items 53, S33, Col. 32, Lines 16-24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. as applied to claim 1 in view of Shkolnikov (Pub. No.: US 2004/0263479 A1).

Sakai et al. teaches external input device is an external keyboard (see Fig. 1, item 53, Col. 19, Lines 49-51).

Sakai et al. does not disclose input information receiving portion receives said external input information through the Application Programming Interface (API) of an operating system that manages the operation of application programs.

Shkolnikov teaches receives said external input information through the Application Programming Interface (API) of an operating system that manages the operation of application programs (See Fig. 20, items 380, 390, paragraph 0123).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teaching of Shkolnikov into Sakai et al. system in order to incorporate active keyboard system (See paragraph 0020 in the Shkolnikov reference).

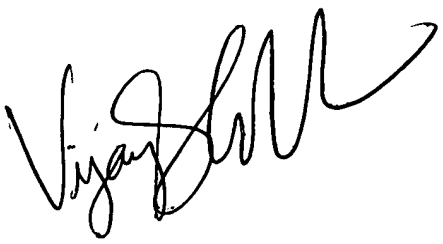
Telephone Inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LS
09.14.05



VIJAY SHANKAR
PRIMARY EXAMINER